

EDUCATIONAL NOTES.

Prof. Josiah Keep, of Mills College, California, under date of March 11, 1907; writes the Editor as follows:

I wish to express my obligations to the MONTHLY WEATHER REVIEW for many interesting and helpful suggestions, which I use with my class in physical geography. Many of the issues I have indexed and placed in a convenient place for reference.

Prof. John L. Tilton, of Simpson College, Indianola, Iowa, under date of April 10, 1907, writes the official in charge, Des Moines, Iowa, that he has this year 45 students in his meteorological class—the largest number he has ever had in the subject. Ward's text is used, supplemented by references to other texts.

At the Chattanooga, Tenn., High School an extensive set of meteorological apparatus has been provided, including almost all the instruments used at a regular station of the Weather Bureau. In October, 1906, a quadruple register was installed and started by Mr. L. M. Pindell, Local Forecaster. Each pupil in the class in meteorology was instructed in the handling and care of the register, and also in the taking of the regular observation, which is taken every day the school is in session. Mr. Pindell has made frequent visits to the class to aid the regular instructor, and on October 30 gave a special lecture to the class on "The weather map".

At the Erie, Pa., High School laboratory work covering the making of synoptic weather charts, rainfall charts, and pressure and temperature curves has been given to the classes in physical geography. These classes and those in physics have visited the Weather Bureau office to become better acquainted with methods of meteorological observation and with the instruments used.

WEATHER BUREAU MEN AS EDUCATORS.

Mr. W. H. Alexander, Observer, began in February a course in elementary meteorology with a class of eight young men, at the University of Vermont, Burlington, Vt. This course is elective, is open to juniors and seniors in the Department of Agriculture, and is to last during the second half of the college year, with one hour per week in the class room.

Beginning next fall it is hoped to give an advanced course in meteorology, open to students who have past in the first course; this will probably cover the first half-year, and call for two hours per week.

It is announced that a course in elementary meteorology will be given by Mr. J. L. Bartlett, Observer, at the summer session of the University of Wisconsin, Madison, Wis., lasting from June 24 to August 3, 1907. This is to be a lecture course, accompanied by practise in the use of meteorological instruments and the taking of weather observations. The lectures are to be given two afternoons each week, and two or more hours of laboratory work per week are expected. The course may be counted as one hour credit for students who are candidates for a degree, but is open to any one who complies with the simple requirements.

Mr. Joseph L. Cline, Observer, Corpus Christi, Tex., under date of May 17, 1907, reports that he has just completed a series of 35 lectures on meteorological and kindred subjects to the seniors and subseniors of the local high school. The pupils were required to read the portions of Waldo's Elementary Meteorology treating of the topics discussed in the lectures.

Arrangements have been made for Mr. Cline to deliver a similar series of lectures at the Corpus Christi Summer Normal School, during June and July, 1907.

Mr. George N. Salisbury, Section Director, will probably

give a course in meteorology at the summer school session of the University of Washington, at Seattle. The session will extend from June 24 to August 2, 1907, and the proposed course in meteorology is to be given on three afternoons each week.

Mr. W. A. Shaw, Local Forecaster, reports that during the winter term of twelve weeks he gave the regular course of instruction in meteorology at Norwich University, Northfield, Vt. Two hours a week are required in the class room. The course is based on Waldo's Elementary Meteorology as a textbook, but much use is made of other standard works, and of maps, charts, publications of the Weather Bureau, and lantern slides. All members of the senior class are required to take this course.

Mr. A. H. Thiessen, Section Director, early in April completed his series of lectures at the Agricultural and Mechanical College, Raleigh, N. C. There were from six to ten students in the class. One general lecture, with lantern slides, was given, to which the junior class also was invited, about seventy-five attending.

Mr. W. M. Wilson, Section Director, Ithaca, N. Y., writes that he has been appointed instructor in meteorology in the College of Arts and Sciences of Cornell University. Heretofore the instruction given by officials of the Weather Bureau has been under the College of Agriculture, the students of other colleges have attended. Of the 42 students registered in the course given this year by Mr. Wilson four are from the College of Arts and Sciences. In the past that college has, however, offered a course in meteorology in connection with physical geography, but in future the course offered by the College of Agriculture will be open to the students of the College of Arts and Sciences upon favorable terms.

At the Binghamton Industrial Exposition, in the Public Library Building, Binghamton, N. Y., March 14 to 27, 1907, a Weather Bureau exhibit was prepared by Mr. John R. Weeks, Local Forecaster. About 400 square feet of wall space was taken up by a series of sheets and maps illustrating how the daily weather map is made; other exhibits showed the uses of the map, the publications of the Bureau, and in general the various ways in which the Bureau serves the public. Upon a table close by were shown a duplicate set of instruments and several of the larger books and pamphlets among the publications of the Bureau. The exposition was visited regularly by pupils of the public schools of the city, under the guidance of their teachers, by students of the business colleges, and by many business men. At the end of the exposition part of the wall exhibit was left in the library building as a permanent exhibit.

The system inaugurated by Mr. Weeks, in accordance with which his typewritten lecture, with the accompanying slides, is sent successively to different seminaries, seems to be working satisfactorily. We note that it was delivered April 9, 1907, at Cazenovia, N. Y., and forwarded on April 10, to Fonda.

Mr. R. F. Young, Section Director, during March, 1907, gave a course of ten lessons to a class in physical geography of the Helena, Mont., High School. The subjects included the weather map and the climatology of Montana. The class visited the Weather Bureau office to inspect the instruments, to draw weather maps from current reports, and to study the movements of areas of high and low pressure.

The following lectures and addresses by Weather Bureau men have been reported:

Mr. Ford A. Carpenter, April 16, 1907, before the San Diego,

Cal., Commercial College, on "The business man and the weather map".

Mr. L. H. Daingerfield, April 28, 1907, before the Channing Club of Pueblo, Colo., on "Climate and life of Mesozoic North America".

Mr. R. J. Hyatt, April 9, 1907, before the State Arid Farming Convention, at Salt Lake City, Utah, on "The distribution of precipitation in Utah".

Mr. J. Warren Smith, March 9, 1907, before the Columbus, Ohio, Young Men's Christian Association, on "The work of the Weather Bureau".

Mr. R. H. Sullivan, April 16, 1907, before pupils of the Emerson School, Wichita, Kans., on "The atmosphere".

Mr. A. H. Thiessen, April 18, 1907, before the classes in science at Peace Institute, Raleigh, N. C., on "Forecasting the weather".

Classes from universities, schools, and colleges have visited the Weather Bureau offices to study the instruments and equipment and receive informal instruction, as reported from the following stations:

Albany, N. Y., November 8, 1906, the physical geography class of the State Normal College; February 14, 1907, the junior class of the State Normal College; March 23, 1907, the juniors of the Albany Young Men's Christian Association; May 14, 1907, the physical geography class of the Rensselaer High School.

Columbus, Ohio, March 2, 1907, a class in geology from the Ohio State University; March 5, 1907, the physical geography class of the State Institution for the Blind.

Pueblo, Colo., April 16 and 23, 1907, pupils of the Fountain Public School.

Raleigh, N. C., April 2, 1907, a class in physics from the Baptist University.

RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

H. H. KIMBALL, Librarian.

The following titles have been selected from among the books recently received, as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies. Most of them can be loaned for a limited time to officials and employees who make application for them.

Bracke, Albert.

Déformations du soleil. Mons. n. d. 16 p. 16°. (Série des curiosités de l'atmosphère. No. 1.)

Nuages irisés. Mons. n. d. 16 p. 16°. (Série des curiosités de l'atmosphère. No. 4.)

Promenade dans la neige. Mons. n. d. 16 p. 16°. (Série des curiosités de l'atmosphère. No. 3.)

Trombes de Belgique. Mons. n. d. 16 p. 16°. (Série des curiosités de l'atmosphère. No. 2.)

Brüel, Georges.

Le cercle du Moyen-Logone. Paris. 1905. 131 p. 8°.

Bürgel, Bruno H.

Wetter-Kalender und kritische Tage für das Jahr 1907. Januar-Juni. Berlin. [1906?] 87 p. 24°.

Drescher, O.

Kosmische Schneewolken. 2 Auflage. Breslau. 1904. 31 p. 8°.

Duncan, Robert Kennedy.

The new knowledge. London. 1906. xviii, 263 p. 8°.

Grühn, Ph.

Die Temperaturverhältnisse Schleswig-Holsteins und Dänemarks. Meldorf. 1896. 30; 24 p. 4°. (Beitr. Jahresb. Gymn. Meldorf. 1895-96; 1896-97.)

Hahn, R.

Das Wetter, die Winde und die Strömungen der Meere. Hamburg. [1904.] 48 p. 4°.

Hollman, M.

Wetterkunde. Eine allgemeinverständliche Anleitung zur Beurteilung der Wetterlage. Berlin. 1907. 52 p. 12°.

Hutter, Franz.

Wanderungen und Forschungen im Nord-Hinterland von Kamerun. Braunschweig. 1902. xiii, 578 p. 4°.

Ihne, E.

Phaenologische Mitteilungen (Jahrgang 1905). n. p. n. d. 28 p. 8°. (S.-A. Abhandl. d. Naturh. Gesellsch. 16 Bd., H. 1. Nürnberg.)

Jefferson, Mark S. W.

Rainfall of the lake country for the last 25 years. n. p. n. d. p. 78-97. 8°. (Repr. 8th annual report Mich. acad. of sc. [1906].)

Kaiser, Max.

Land- und Seewinde an der deutschen Ostseeküste. Inaug.-Diss. . . Halle a. S. Halle a. S. 1906. 22 p. 4°.

Krebs, H.

Was ist morgen für Wetter? Berlin. 1907. 59 p. 12°.

Luedecke, C.

Das Verhältnis zwischen der Menge des Niederschlages und des Sickerwassers nach englischen Versuchen. Berlin. 1906. p. 615-646. 4°. (S.-A. Mitt. Landwirtsch. Inst. Königl. Univ. Breslau. 3 Bd. Heft 5.)

MacGregor, Sir William.

Address . . . delivered at the opening of the Newfoundland agricultural exhibition, in the British hall, St. John's, 17th October, 1906. n. p. n. d. 6 p. With tables. f°.

Marloth, R.

Results of experiments on Table Mountain for ascertaining the amount of moisture deposited from the southeast clouds. n. p. n. d. p. 403-408. 4°. (Fr. Trans. South African phil. soc. v. 14. Pt. 4. Oct., 1903.)

Results of further experiments on Table Mountain for ascertaining the amount of moisture deposited from the southeast clouds. (Fr. Trans. South African phil. soc. v. 16. Pt. 2. Oct., 1905.)

Netherlands. Koninklijk Nederlandsch meteorologisch instituut.

Annuaire. 27 année. 1905. A. Météorologie. Utrecht. 1907. xxxvi, 260 p. f°.

Otto, —.

Das Klima von Eisleben nach den meteorologischen Beobachtungen der Jahre 1885-1905. Eisleben. 1906. 19 p. 8°. (Beil. Jahresb. Königl. Gymn. zu Eisleben 1906.)

Pernter, J. M.

Der Formenreichtum der Schneekristalle. Berlin. 1907. 32 p. 12°. (Vorträge Ver. naturw. Kennt. Wien. 46. Jahrg. Heft 15.)

Petre, F. Loraine.

The republic of Colombia. London. 1906. xii, 352 p. 8°.

Rizzo, G. B.

Contributo allo studio del terremoto della Calabria del giorno 8 settembre 1905. (Estr. Atti della R. Acad. Peloritana. v. 23. Fasc. 1.) Messina. 1907. 86 p. 8°.

Rotch, Abbott Lawrence.

Did Benjamin Franklin fly his electrical kite before he invented the lightning rod? Worcester, Mass. 1907. 8 p. 8°.

St. Petersburg. Institut impérial forestier. Observatoire météorologique.

Observations 1905. St. Petersburg. 1907. xii, 73 p. 12°.

Schück, A.

Zwei magnetische Beobachtungen vor der Westküste Norwegens im Jahre 1902. Beiträge zur Meereskunde. Hamburg. 1905. v. p. 4°.

Spariosu, Basil.

Wissenschaftlich begründete Wetter-Prognose für das Jahr 1907. Kremsmünster. n. d. 4 p. 24°.

Sreznhevskii, B.

Ezhemesiachnye obzory pogody v Evropie i preimushchestvenno v Evrop. Rossii (khronika pogody) za 1900. . . [Monthly review of the weather of Europe and especially of European Russia.] . . . St. Petersburg. 1902. viii, 126 p. 4°.

Stonyhurst (England). Stonyhurst college observatory.

Results of meteorological and magnetical observations. 1906. Clitheroe. 1907. vi, 56 p. 12°.

Tananarive. Observatoire de Madagascar.

Observations météorologiques. . . 1904. Tananarive. 1906. vi, 265 p. 8°.

Vernon, Edward.

Is it going to rain? 2d ed. Edinburgh. n. d. 106 p. 16°.

Vregille, Pierre de.

L'Observatoire Tananarive (1898-1906). n. t. p. 12 p. 8°.

Weber, Sir Hermann, and Weber, F. Parker.

Climatotherapy and balneotherapy. London. 1907. 833 p. 4°.

Western Australia. Government astronomer.

Meteorological observations made at the Perth observatory and other places in Western Australia during the year 1905. Perth. 1906. 143 p. f°.

RECENT PAPERS BEARING ON METEOROLOGY.

H. H. KIMBALL, Librarian.

The subjoined titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology or cognate